

IN THE CLAIMS:

Please amend claims 1, 3-9, 14-19, and 20, 25-36, so that a complete list of the pending claims will read as follows:

1. (Currently Amended) A method for changing a frequency of a central processing unit (CPU) under the control of a neural network of a computer system, comprising:

providing a plurality of environmental parameters that affect usage rate of the CPU with respect to components of the computer system when the CPU operates at a first frequency based on an external frequency;

calculating an output vector by inputting the environmental parameters to the neural network, wherein the output vector is determined according to a weighted sum of a plurality of basis vectors based on the environmental parameters; [[and]]

determining a clock multiplier factor according to the output vector; and

changing the frequency of the CPU according to the output vector by enabling the CPU to operate at a second frequency according to the clock multiplier factor and the external frequency.

2. (Original) The method of claim 1, wherein the neural network is a radial neural network.

3. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU uses currently.

4. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU ~~uses~~ used previously.

5. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

6. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for a DMA (Direct Memory Access) controller.

7. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for an AGP (Accelerated Graphics Port) interface.

8. (Currently Amended) The method of claim 1, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

9. (Currently Amended) A method for changing a frequency of a central processing unit (CPU) under the control of a neural network of a computer system, wherein the neural network comprises m basis functions and m basis weights ~~for calculating an output vector according to n environmental parameters~~, the method comprising steps of:

providing ~~[[the]]~~ n environmental parameters that affect usage rate of the CPU with respect to components of the computer system when the CPU operates at a first frequency based on an external frequency;

calculating m basis vectors by substituting the n environmental parameters into the m basis functions;

calculating ~~[[the]]~~ an output vector according to the m basis weights and the m basis vectors, wherein the output vector is determined according to a weighted sum of the m basis vectors with the m basis weights; ~~[[and]]~~

determining a clock multiplier factor according to the output vector; and

changing the frequency of the CPU according to the output vector by enabling the CPU to operate at a second frequency according to the clock multiplier factor and the external frequency, wherein m and n are positive ~~integrals~~ integers.

10. (Original) The method of claim 9, wherein the neural network is a radial neural network.

11. (Original) The method of claim 9, wherein the basis functions comprise a radial basis function.

12. (Original) The method of claim 11, wherein the radial basis function is a Gaussian function.

13. (Original) The method of claim 11, wherein the radial basis function is a multiquadric function.

14. (Currently Amended) The method of claim 9, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU uses currently.

15. (Currently Amended) The method of claim 9, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU ~~uses~~ used previously.

16. (Currently Amended) The method of claim 9, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

17. (Currently Amended) The method of claim 9, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for a DMA (Direct Memory Access) controller.

18. (Currently Amended) The method of claim 9, wherein the environmental

~~parameters comprises~~ comprise a data accessing condition for an AGP (Accelerated Graphics Port) interface.

19. (Currently Amended) The method of claim 9, wherein the environmental ~~parameters comprises~~ comprise a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

20. (Currently Amended) A method for changing a frequency of a central processing unit (CPU) under the control of a neural network of a computer system, wherein the neural network comprises m basis functions ~~for calculating an output vector according to n environmental parameters~~, the method comprising steps of:

(i) executing a learning procedure, ~~further step (i)~~ comprising:

providing p pseudo dummy environmental parameters

providing a pseudo dummy output vector; and

calculating m basis weights by the neural network according to the p pseudo dummy environmental parameters and pseudo the dummy output vector; and

(ii) executing an application procedure, ~~further step (ii)~~ comprising:

providing [[the]] n environmental parameters that affect usage rate of the CPU with respect to components of the computer system when the CPU operates at a first frequency based on an external frequency;

calculating m basis vectors by substituting the n environmental parameters into the m basis functions;

calculating ~~[[the]]~~ an output vector according to the m basis weights calculated in the learning procedure and the m basis vectors, wherein the output vector is determined according to a weighted sum of the m basis vectors with the m basis weights; ~~[[and]]~~

determining a clock multiplier factor according to the output vector; and
changing the frequency of the CPU according to the output vector by
enabling the CPU to operate at a second frequency according to the clock multiplier factor and the external frequency, wherein m, n and p are positive ~~integrals~~ integers.

21. (Original) The method of claim 20, wherein the neural network is a radial neural network.

22. (Original) The method of claim 20, wherein the basis functions comprise a radial basis function.

23. (Original) The method of claim 22, wherein the radial basis function is a Gaussian function.

24. (Original) The method of claim 22, wherein the radial basis function is a multiquadric function.

25. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU uses currently.

26. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU ~~uses~~ used previously.

27. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

28. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a data accessing condition for a DMA (Direct Memory Access) controller.

29. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a data accessing condition for an AGP (Accelerated Graphics Port) interface.

30. (Currently Amended) The method of claim 20, wherein the ~~pseudo~~ dummy environmental parameters ~~comprises~~ comprise a data accessing condition for a PCI (Peripheral Component Interconnect) interface.

31. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU uses currently.

32. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a clock multiplier factor that the CPU uses previously.

33. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for an IDE (Intelligent Drive Electronics) controller.

34. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for a DMA (Direct Memory Access) controller.

35. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for an AGP (Accelerated Graphics Port) interface.

36. (Currently Amended) The method of claim 20, wherein the environmental parameters ~~comprises~~ comprise a data accessing condition for a PCI (Peripheral Component Interconnect) interface.